DOCUMENT RESUME

ED 307 315 TM 013 443

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TITLE Differences in Interpersonal Reasoning among Intellectually Talented and Intellectually Typical Children.
PUB DATE Mar 89
NOTE 27p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, March 27-31, 1989).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academically Gifted; Comparative Analysis; *Elementary School Students; Empathy; Friendship; Grade 3; Individual Differences; Intelligence; *Interpersonal Competence; *Maturity (Individuals); Parent Child Relationship; *Peer Relationship; Primary Education; *Social Cognition; Talent
IDENTIFIERS *Interpersonal Cognitive Problem Solving; Normal Children; Psychosocial Development

ABSTRACT

A study involving 46 intellectually talented and 46 typical third graders was undertaken to assess differences in psychosocial maturity across the groups. Focus was on examining psychosocial maturity through assessment of interpersonal reasoning, which is defined as the ways children exhibit sensitivity to the feelings of others and assume another's perspective. All subjects were white native English speakers, with an average age of 8 years and 4 months. Interpersonal reasoning was assessed through Piaget-style clinical interviews developed by R. L. Selman (1980). Each interview consisted of an interpersonal dilemma and a set of structured questions designed to elicit the interviewee's interpersonal reasoning relative to concepts of individuals, parent-child relationships, friendship, and peer relationships. Results indicate qualitative differences in interpersonal reasoning favoring intellectually talented children. Maturity in intellect appears to be accompanied by advanced understanding of and sensitivity to the feelings of others. However, the factors underlying the differences between the intellectually talented and the intellectually typical children may not represent differences in interpersonal reasoning abilities per se; they may be differences in verbal fluency or social experiences. A 38-item list of references is included. Examples of the interpersonal reasoning dilemmas in the domain of the individual and in that of friendship are appended. (TJH)

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Differences in Interpersonal Reasoning Among Intellectually Talented and Intellectually Typical Children

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Paper presented to the annual meeting of the American Educational Research Association, March 27-31, 1989, San Francisco, California

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Differences in Interpersonal Reasoning Among Intellectually Talented and Intellectually Typical Children

Are intellectually talented children advanced in psychosocial maturity as well as cognitive development? Typically parents and educators are doubtful. Statements such as "The gifted child is academically talented but usually socially immature" reflect the assumption that psychosocial maturity corresponds more closely to chronological than to mental age. This assumption, however, is far from proven (Janos & Robinson, 1985). Anyone hoping to enhance the well-rounded growth of intellectually talented children needs to consider how and to what extent these children evidence social cognitions, friendships, and interpersonal understandings.

Psychosocial maturity has been operationalized in the research in a variety of ways including social problem solving (Roedell, 1978), affective perspective taking (Abroms & Gollin, 1980), moral judgment (Tan-William & Gutteridge, 1981), social knowledge (Scott & Bryant, 1978), sociability (Berndt, Kaiser, & Van Aalst, 1982), and scores on self-concept measures (Kelly & Colangelo, 1984). The literature on the psychosocial maturity of intellectually talented children is largely inconclusive, however, because of methodological problems, restricted samples, and lack of comparison groups. Furthermore, only a few of the constructs and behaviors that contribute to psychosocial maturity have been addressed.

One area that has been neglected in relation to the psychosocial maturity of intellectually talented children is interpersonal

reasoning. Interpersonal reasoning refers to the individual's ability to assume another person's perspective and understand his or her feelings (Selman, 1980). Piaget was one of the first to investigate the development of children's ability to assume another's perspective. He and Inhelder (Piaget & Inhelder, 1965) conducted a series of experiments to determine the age at which children can understand another's perceptual perspective when it differs from their own. Piaget and Inhelder found that because they are egocentric, children younger than age 7 were unable to take the perspective of others. Using different types of tests, other researchers have found that although preschoolers are not entirely as ignorant of other's feelings and thoughts as Piaget suggested (Shantz, 1975; Borke, 1975), the ability to take the perspective of others is acquired gradually and becomes more refined with age.

Robert Selman (1976, 1980) has proposed a developmental theory of perspective taking. According to Selman's theory of interpersonal reasoning, perspective taking moves through a series of five stages ranging from three years of age through the adolescent years. These stages span the egocentric viewpoint of the preschool child to the in-depth societal perspective-taking view of the adolescent. Selman (1980) has shown how these stages of interpersonal reasoning can be applied to four dimensions of social development: concepts of individuals, concepts of friendship, concepts of peers, and concepts of parent-child relationships. Evidence to support the claim of developmental stages of interpersonal reasoning comes from both

cross-sectional (Selman & Byrne, 1974) and longitudinal research (Gurucharri & Selman, 1982; Gurucharri, Phelps, & Selman, 1984).

Not surprisingly, Selman's stages of interpersonal reasoning appear to be related to performance on Piagetian cognitive measures (Keating & Clark, 1980) and intelligence tests (Pellegrini, 1985). It is logical to assume, therefore, that intellectually talented children would display developmentally advanced interpersonal reasoning. However, it is quite possible for an individual to mature intellectually and to grow less egocentric without developing interpersonal understandings (Shantz, 1983). To date, there has not been adequate investigation of the interpersonal reasoning of intellectually talented children as compared to their intellectually typical agemates.

Purpose of Study

The purpose of the present study was to assess differences in psychosocial maturity between intellectually talented children and children not identified as intellectually talented. The study focused on the the examination of psychosocial maturity through assessment of interpersonal reasoning defined as "the ways children exhibit sensitivity to the feelings of others and assume another's perspective" (Selman, 1976, p. 301). Answers to the following questions were sought:

1. When presented with interpersonal dilemmas are the responses of intellectually talented children qualitatively different from those of their agemates not identified as intellectually talented?

2. On the basis of their responses to interpersonal dilemmas, do intellectually talented and intellectually typical children differ significantly in their developmental stages of interpersonal reasoning?

Method

Sample

The subjects of the study were 46 intellectually talented third graders and 46 third graders not identified as intellectually talented enrolled in the seven elementary schools of a metropolitan school district in southeastern Idaho. The intellectually talented students were selected from a list of third-grade students identified as being eligible for the district's Talented and Gifted Program according to the following program selection criteria: (1) scores at the 99 percentile on either the reading or mathematics subtests of the Iowa Tests of Basic Skills and (2) teacher recommendation based on classroom grades and academic achievement. For the purpose of the study, the Stanford-Binet Intelligence Scale was administered to the identified Talented and Gifted Program students and only those with scores of 130 and above were subsequently included in the study sample. Forty-six third graders were then randomly selected from those students not identified by the district as intellectually talented, excluding students labeled as learning disabled, mentally retarded, or placed in resource classrooms.

Subjects were without exception caucasion, and all spoke English as their first language. The average age of the subjects was approximately eight years four months (SD = 5.12 months). Each of

the two comparison groups (i.e., intellectually talented and intellectually typical) comprised 26 girls and 20 boys. There were no significant differences between the two groups in terms of family income (intellectually talented: $\bar{X}$ = \$23,000, SD = \$1898; intellectually typical: $\bar{X}$ = \$22,890, SD = \$1772; t = .66, p = .52) or the number of children who had repeated a grade.

Instrumentation

Interpersonal reasoning was assessed through clinical interviews developed by Robert L. Selman (1980). Each clinical interview consisted of an interpersonal dilemma and a set of structured questions designed to elicit the individual's interpersonal reasoning relative to four domains: (1) concepts of individuals, (2) concepts of friendship, (3) concepts of peers, and (4) concepts of parent-child relationships. Within each domain are a number of issues, "critical processes and important qualities in the conceptualization of the domain" (Selman, 1980). Table 1 presents the issues of interpersonal reasoning related to the two domains addressed in the present study--concepts of individuals and concepts of friendship. Each of the identified issues was used as the basis for a series of structured questions about the individual's beliefs and experiences around that issue. Responses to the issue-questions were then qualitatively analyzed and coded in order to establish the individual's developmental stage of interpersonal reasoning relative to each domain.

The construct validity of the dilemma-interviews as a method of assessing and organizing interpersonal reasoning into developmental

Table 1

Issues of Interpersonal Reasoning Related to Concepts of the Individual and Friendship

Individual	Friendship
1. Subjectivity: covert properties of persons (thoughts, feelings, motives); conflicts between thoughts or feelings within the person	1. Formation: why (motives) and how (mechanisms) friendships are made; the ideal friend
2. Self-awareness: awareness of the self's ability to observe its own thoughts and actions	2. Closeness: types of friendship, ideal friendship, intimacy
3. Personality: stable or predictable character traits (a shy person, etc.)	3. Trust: doing things for friends; reciprocity
4. Personality change: how and why people change (growing up, etc.)	4. Jealousy: feelings about intrusions into new or established friendships
	5. Conflict resolution: how friends resolve problems
	6. Termination: how friendships end

From R. Selman. (1980). The growth of interpersonal understanding. New York: Academic Press.

stages has been determined by validiation studies with a normative sample (Selman & Cooney, 1979), a longitudinal sample (Selman, Jaquette, & Lavin, 1977), and a clinical-comparative sample (Cooney, 1977). In all cases, correlational and factor analyses support the unity and synchrony of the cross-issue system across developmental stages in the individuals and friendship domains.

Investigations of the reliability of the assessment process and scoring procedures have focused on three areas: (1) intrarater reliability, (2) interrater reliability, and (3) test-retest reliability. Using an interview schedule covering the individuals and friendship domains, Cooney (1978) reported intrarater reliabilities of .64 to .93 across issues within each domain. Studies of interrater reliability yielded correlations between trained scorers of .96 for the individuals domain and .87 for the friendship domain (Selman, Jaquette, & Lavin, 1977). In a study of test-retest reliability, Enright (1977) reported correlations of .92 in elementary school children across a 22-week period. Brion-Meisels (1979) reported correlations of .61 in the same age range across a six-month period.

Procedures

The assessment of interpersonal reasoning employed an interview approach based on the general tenets of the Piagetian *methode clinique* (1926) in which subjects were presented with interpersonal dilemmas followed by a series of structured follow-up questions. As stated previously, the present study focused on the individuals and friendship domains of interpersonal understanding. For each

domain, a dilemma was presented in the form of a sound filmstrip (Guidance Associates, 1979) individually to each study subject. Transcripts of the dilemmas appear in the Appendix. Following presentation of the dilemma, the child was interviewed using a set of structured questions (Selman, Jaquette, & Bruss-Saunders, 1979) designed to elicit the child's reasoning about specific domain issues. The interviews averaged approximately 40 minutes per dilemma.

Responses to the questions were audio-taped and then later coded by the principal investigator and three graduate students following procedures outlined by Selman, Jaquette, and Bruss-Saunders (1979). Based upon the child's responses to the structured questions, each domain issue was scored as a stage (e.g., Stage 2). For each domain, a quantitative score was computed by averaging all issue scores to obtain the total stage score for the domain. In addition, an overall quantitative Interpersonal Understanding Maturity Score (IMS) was computed by averaging all issue scores from the two domains. Interrater reliability for the four raters scoring subject responses indicated agreement rates of approximately 89%.

Data Analysis

Data analysis consisted of three procedural levels. First, responses to the dilemmas were qualitatively analyzed in order to investigate patterns of interpersonal reasoning related to the individuals and friendship domains. Second, following the coding of responses into Selman's five stages of interpersonal reasoning,

mean Interpersonal Understanding Maturity Scores (IMS) were computed for the two study groups (i.e., intellectually talented and intellectually typical). Finally, the mean scores were compared using one-way analysis of variance (ANOVA).

Results

Patterns of Interpersonal Reasoning

All responses to the dilemmas were qualitatively analyzed in order to investigate patterns of interpersonal reasoning across the four issues of the individuals domain (i.e., subjectivity, self-awareness, personality, and personality change) and the six issues of the friendship domain (i.e., formation, closeness, trust, jealousy, conflict resolution, and termination). Analysis revealed qualitative differences in interpersonal reasoning between the intellectually talented and intellectually typical children.

Individuals Domain. The intellectually typical children were able to recognize the feelings of others but interpreted those feelings only in relation to specific events. Furthermore, it was difficult for the intellectually typical children to understand that one person can have conflicting thoughts or feelings toward the same social situation at one time. The intellectually talented children, on the other hand, were able to recognize that people are capable of having mixed thoughts, feelings, and motives toward the same object or situation simultaneously. As such, to the intellectually talented children, people can present an overt appearance of self that may or may not identically correspond to inner feelings.

With regard to self-awareness, although they were aware that motives underlie behavior, the intellectually typical children took what persons say about their motives at face value. It was difficult for the children to understand that persons can distort feelings, that is, feel one way and say they feel another. In general, the intellectually typical children appeared to believe that feelings are not easily hidden, and that overt behavior will generate clues to inner feelings. The intellectually talented children, however, appeared to recognize that persons may do things they don't want to do or say things they don't believe because other thoughts or motives so dictate. Here, individuals were viewed as self-aware in the sense that they can weigh the relative values of conflicting feelings and motives.

To the intellectually typical children, personality was context-specific and seen as being manifested in abilities and skills. Likewise, personality change was seen as improvement of skills with age: however, the categories of improvement tended to be those of overt behavior or the learning of specific facts. The intellectually talented children, on the other hand, appeared to understand personality in terms of a person's feelings and moods as well as actions. Because the concept of personality was understood to represent a predictable set of character traits, it was also viewed by the intellectually talented children as relatively stable and unchangeable. Furthermore, these children recognized the qualitative difference between changing one's personality and changing one's

habits, the latter being a relatively easy process and the former a much more difficult one which requires a basic personal reorganization.

Friendship Domain. The intellectually typical children viewed friendship as a one-way assistance in which friends were understood to be important because they perform specific overt activities which the self wants done ("You need a friend because you want to play some games and you have to get someone who will play the way you want him to"). One person's interests or attitudes are set up as a fixed standard, and for a friendship to form the other person must meet the standard thus formulated. The intellectually talented children, on the other hand, viewed friendship as an intimate and mutual sharing. Good friendships were seen as developing over a period of time in which parties go through mutual experiences, discover each other's personality and traits, and become familiar with each other's common interests.

With regard to closeness, the intellectually typical children rank ordered friendships on the basis of how closely each friend matched the self's interests, for example, "A closest friend is the one who knows which games you like to play the best." This one-way conception was also applied to the issue of trust. A trusting relationship was seen as one in which the friend has good intentions or motives toward the self. To the intellectually talented children, however, closeness within a friendship was seen in the degree to which two persons share intimate personal concerns and the effort they make to maintain the relationship. Likewise, trust was a

major conceptual force signifying that each party is willing to share these intimate thoughts and feelings with his or her friend, thoughts and feelings that are not shared with less intimate friends or acquaintances.

To the intellectually typical children, causes of conflict in friendships were seen as unilateral; one person acts in such a way as to cause a problem for the other. The resolution of these conflicts was also viewed as one-way; the friend needs to undo or negate the action and restore the partner to a more comfortable state. The intellectually talented children, however, appeared to believe that conflict adequately worked through can strengthen the relationship. Talking things out was seen as a common strategy for conflict resolution. In addition, the intellectually talented children differentiated between the kinds of conflicts which are relatively minor and which the relationship itself helps to ameliorate, and the types of conflicts which threaten the relationship. The latter types of conflicts were understood to be those which break the bond of trust and, thus, terminate the friendship.

Developmental Differences

Following qualitative analysis and the coding of responses into Selman's five stages of interpersonal reasoning, mean developmental stage scores were computed for each issue within the individuals and friendship domains. Mean Interpersonal Understanding Maturity Scores (IMS) were then computed for the intellectually talented children and the children not identified as intellectually talented.

Table 2 presents the mean issue scores and IMS scores for the two study groups. As expected from the qualitative analysis, the means for the intellectually talented children were higher than those for the intellectually typical children across all issues in both domains. In addition, the mean Interpersonal Understanding Maturity Score for the intellectually talented group ($\bar{X}$ = 3.26, SD = .21) was greater than the mean IMS score for the intellectually typical group ($\bar{X}$ = 1.47, SD = .23).

Subsequent analysis of variance revealed that the difference between mean Interpersonal Understanding Maturity Scores was significant (F = 7.10, ρ =.008) indicating that the intellectually talented children functioned at a significantly higher stage of interpersonal reasoning than the children not identified as intellectually talented. With regard to the individuals domain, the means for the intellectually talented children were significantly greater than those for the intellectually typical children across all four domain issues--subjectivity (F = 7.04, ρ < .01), self-awareness (F = 7.06, ρ < .01), personality (F = 7.06, ρ < .01), and personality change (F = 7.04, ρ < .01). For the friendship domain, the means of the intellectually talented children were significantly greater than those for the intellectually typical children on all of the domain issues--formation (F = 7.04, ρ < .01), closeness (F = 7.10, ρ < .01), trust (F = 7.07, ρ < .01), jealousy (F = 7.04, ρ < .01), conflict resolution (F = 7.10, ρ < .01), and termination (F = 7.07, ρ < .01).

Table 2

Mean Interpersonal Reasoning Scores

Domain	Intellectually Typical $\bar{X}$	Intellectually Typical SD	Intellectually Talented $\bar{X}$	Intellectually Talented SD	F	p
Individuals Domain	1.48	.23	3.29	.22	7.05	.005
1. Subjectivity	1.46	.22	3.26	.21	7.04	.003
2. Self-awareness	1.50	.23	3.29	.23	7.06	.007
3. Personality	1.51	.24	3.30	.23	7.06	.007
4. Personality change	1.48	.22	3.33	.22	7.04	.003
Friendship Domain	1.45	.21	3.27	.20	7.05	.004
1. Formation	1.40	.25	3.30	.19	7.04	.003
2. Closeness	1.51	.26	3.26	.24	7.10	.008
3. Trust	1.49	.21	3.26	.22	7.07	.006
4. Jealousy	1.39	.19	3.31	.18	7.04	.003
5. Conflict resolution	1.51	.20	3.28	.20	7.10	.008
6. Termination	1.41	.18	3.25	.17	7.07	.006
Overall Interpersonal Understanding Maturity Score	1.47	.23	3.26	.21	7.10	.008

Discussion

On the basis of their responses to interpersonal dilemmas, intellectually talented children functioned at a significantly higher developmental stage of interpersonal reasoning than their agemates not identified as intellectually talented. The intellectually typical children were able to recognize the feelings of others but interpreted those feelings only in relation to specific events. They were not able to view two emotional perspectives at once and could not understand subtleties of feelings and interactions. The intellectually talented children, on the other hand, were capable of recognizing the feelings of others, differentiating those feelings from their own, and interpreting interactions in a variety of situations. Maturity in intellect, therefore, appears to be accompanied by advanced understanding of and sensitivity to the feelings of others. However, the factors underlying the differences between the intellectually talented and intellectually typical children may not be differences in interpersonal reasoning abilities per say; they may be differences in verbal fluency or social experiences.

Interpersonal Reasoning and Verbal Fluency

Numerous researchers have shown that intellectually talented individuals are advanced in verbal fluency (Perkins, 1981; Rothenberg, 1979; Terman, 1925 & 1930). Thus, it is reasonable to assume that the intellectually talented would be at an advantage in assessment situations requiring verbal expression. As such, a concern addressed

in the present study was the possible mediating effects of verbal fluency on performance in the interpersonal reasoning interviews.

An attempt to control for possible mediating effects of verbal fluency was undertaken through a nonthreatening clinical approach to the interviewing process. The dilemma-interview procedure was not viewed as an assessment of an individual's thinking or ability, but as an eliciting interview, a means of gaining increasingly complete descriptive information. A series of semistructured questions were used as stimuli to responses on the part of both interviewer and interviewee. Furthermore, follow-up questions were utilized as probes for clarification of meaning. These probes, in turn, were followed by an exploration of the subject's application of the interpersonal reasoning issues to his or her own personal experience. Through the dilemma-interview process, interviewers were able to gain the child's confidence enough to promote insights and adequately probe vague responses necessary to elucidating the child's level of interpersonal reasoning despite the child's verbal fluency.

To further control for the possible mediating effects of verbal fluency, interpersonal reasoning issue scores were analyzed by mean length of verbal utterance (i.e., number of words said by the subject during each dilemma interview). Analysis revealed no significant differences in mean length of utterance for the intellectually talented and intellectually typical children on either the individuals domain interview ($F = 1.18$, $p = .20$) or the friendship domain

interview (F = 1.02, p = .36). These results suggest that the differences in interpersonal reasoning for the intellectually talented and intellectually typical children were not mediated or confounded by differences in verbal fluency.

Interpersonal Reasoning and Social Experience

Social experience may be another mediating factor in the determination of differential abilities in interpersonal reasoning among intellectually talented and intellectually typical children. Researchers point out that children who lack the opportunity to interact with other children are less skilled at taking the perspective of others than children who do have extensive social experiences (Bridgeman, 1981; Hollos, 1975; Nelson & Abroud, 1985). For example, by assuming different roles while playing, children become more aware of discrepancies between their own perspectives and those of their playmates. And when conflicts arise in play, children must learn to integrate their points of view with those of their companions in order for play to continue. It appears, therefore, that social experiences among peers are important contributors to social perspective taking and the growth of interpersonal reasoning.

Evidence of the relationship between social experiences and interpersonal reasoning necessitates a paradignmatic shift in the research investigating differences in psychosocial maturity among intellectually talented and intellectually typical children. Future studies will need to consider the possible mediating effects of social experience on the development of interpersonal understandings.

As such, simultaneous assessments of interpersonal reasoning and social interaction factors (i.e., play activities, quantity and types of peer interactions, etc.) will provide a more complete picture of the psychosocial maturity of both intellectually talented and intellectually typical children.

Conclusions

The findings of the present study suggest that intellectually talented children differ from their agemates not identified as intellectually talented in psychosocial maturity as assessed by developmental stage of interpersonal reasoning. Maturity in intellect appears to be accompanied by advanced understanding of and sensitivity to the feelings of others. Furthermore, advanced cognitive ability appears to support advanced capacities for understanding subtleties of feelings and for taking societal perspectives.

Numerous studies indicate that a child's interpersonal reasoning has an impact on social behaviors and relationships with others (Berndt, 1982; Furman & Bierman, 1983; Selman, 1980). Children become more selective about whom they call a friend as they begin to understand the viewpoints of their peers and the reciprocal nature of friendships in which parties involved act with mutual respect, kindness, and affection. A child's interpersonal reasoning skills may also affect his or her status in the peer group; the most popular children are those who have well-developed interpersonal reasoning skills (Kurdek & Krile, 1982). Moreover, highly sociable children and those who have established intimate friendships score higher on tests of

interpersonal reasoning than their less social classmates (LeMare & Rubin, 1987; McGuire & Weisz, 1982).

It is reasonable to suggest, therefore, that because they evidence higher develomental stages of interpersonal reasoning intellectually talented children characteristically differ from typical children in both intellectual and social abilities. These differences contradict the widely held notion that, aside from being cognitively mature, intellectually talented children are better characterized by their chronological rather than mental age. Methods, materials, and organizational patterns for educational programs should be clearly related to the needs and characteristics of the intellectually talented in both cognitive and psychosocial aspects of development.

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Appendix

Interpersonal Reasoning Dilemmas

Individuals Domain: The Puppy Story

Tom has just saved enough money to buy Mike Hunter a birthday present. He and his friend Greg go downtown to try to decide what Mike will like. Tom tells Greg that Mike is sad these days because Mike's dog Pepper ran away. They see Mike and decide to try to find out what Mike wants without asking him right off. After talking to Mike for a while the kids realize that Mike is really sad because of his lost dog. When Greg suggests he get a new dog, Mike says he can't just get a new dog and have things be the same. Then Mike leaves to run some errands. As Mike's friends shop some more they see a puppy for sale in the pet store. It is the last one left. The owner says that the puppy will probably be sold by tomorrow. Tom and Greg discuss whether to get Mike the puppy. Tom has to decide right away. What do you think Tom will do?

Friendship Domain: How Would You Feel?

Kathy and Becky have been best friends since they were 5 years old. They went to the same kindergarten and have been in the same class ever since. Every Saturday they would try to do something special together, go to the park or the store, or play something special at home. They always had a good time with each other.

One day a new girl, Jeanette, moved into their neighborhood and soon introduced herself to Kathy and Becky. Right away, Jeanette and Kathy seemed to hit it off very well. They talked about where Jeanette was from and the things she could be doing in her new town. Becky, on the other hand, didn't seem to like Jeanette very well. She thought Jeanette was a showoff, but was also jealous of all the attention Kathy was giving Jeanette.

When Jeanette left the other two alone, Becky told Kathy how she felt about Jeanette. "What did you think of her, Kathy? I thought she was kind of pushy, butting in on us like that."

"Come on, Becky. She's new in town and just trying to make friends. The least we can do is to be nice to her."

"Yeah, but that doesn't mean we have to be friends with her," replied Becky. "Anyway, what would you like to do this Saturday? You know those old puppets of mine? I thought we could fix them up and make our own puppet show."

"Sure Becky, that sounds great," said Kathy. "I'll be over after lunch. I better go home now. See you tomorrow."

Later that evening Jeanette called Kathy and surprised her with an invitation to the circus, the last show before it left town. The only problem was that the circus happened to be at the same time that Kathy had promised to go to Becky's. Kathy didn't know what to do, go to the circus and leave her best friend alone, or stick with her best friend and miss a good time.